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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,377	11/26/2001	Mark E. Fauver	UNIV0130	8210
25268	7590	01/12/2004	EXAMINER	
LAW OFFICES OF RONALD M ANDERSON			HEALY, BRIAN	
600 108TH AVE, NE			ART UNIT	
SUITE 507			PAPER NUMBER	
BELLEVUE, WA 98004			2874	

DATE MAILED: 01/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/994,377

Applicant(s)

FAUVER ET AL.

Examiner

Brian M. Healy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-26 is/are allowed.
- 6) ☒ Claim(s) 1, 8, 9, 11, 12, 14-17, 32 and 38-45 is/are rejected.
- 7) ☒ Claim(s) 2-7, 10, 13, 18, 28-31 and 33-37 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) same.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 2-7,10,13, 18, 28-31, and 33-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the references of record includes a scanner including a waveguide distal sections of different radii around the longitudinal axis with each section having a different resonance when driven by a scanning actuator. These limitations are recited in claims 2-7,10,13 and 18. None of the references of record further comprising a step of applying a (centrifugal rotational) force (after heating the distal end) to shape the micro-lens so as to achieve the desired optical properties while using optical monitoring. These limitations are recited in claims 28-31 and 33-37.

Claims 19-26 are allowed over the prior art of record. None of the references of record teaches or suggests a method of creating a hinge in a light guide comprising the steps of providing a waveguide with a tapered portion, heating a material along the tapered portion to produce a hinge; reducing the cross-sectional area size of the tapered portion at the point; cooling the tapered portion to an ambient temperature so that the waveguide is more readily bendable at the hinge than at other portions of the tapered portions of the tapered section when driven by an applied force. The hinge portion can be formed by a fluid including an etchable acid layer. An optical lens can be formed at the end of the waveguide by placing a drop of adhesive at the end of

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a waveguide and rotating the waveguide end to produce a lens shape which is then cured. These features are recited in claims 19-31.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,8,9,11,12,14-17,32 and 38-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Kopelman et. al., U.S.P. No.5,627,922.

Kopelman et. al., U.S.P. No.5,627,922 teaches (Figs.1-9) a scanner used in conjunction with near-field optical scanning microscopy comprising: a waveguide 130,140 having a distal end and a proximal end with the distal end being formed to have a non-linear taper that decreases in size along a longitudinal axis of the waveguide towards the distal tip of the waveguide 137 wherein the distal tip also includes an integral lens 134 and there is a scanning actuator 20 (electrically or electrostatically motivated) that is disposed adjacent to the waveguide with the scanning actuator drives the waveguide to move the distal tip in a desired scanning motion (X-Y-Z)(this can include circular motion, arc motion, ect.) and a control circuit (not shown but clearly implicit) in the action of the scanning actuator 20, which clearly, fully meets Applicant's claimed limitations.

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a. Claims 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Clark et. al., U.S.P. No.4,804,395.

Clark et. al. '395 teaches (Figs.1-4) a method of forming a micro-lens on a waveguide comprising the steps of: directing a beam of energy 24,26 at a distal tip of the waveguide to heat a material comprising the distal tip; heating the distal tip of the waveguide with a beam of energy to melt the material and form a micro-lens12,14 from a droplet of the material that has been melted and allowing the droplet to cool, which clearly, fully meets Applicant's claimed limitations.

The following references are also cited by the Examiner as being pertinent prior art:  
Fauver et. al., U.S. Patent Application Publication No.U.S. 2002/0064341 A1 (Figs.1-20B),  
Tomita, U.S.P. No.5,894,122 (Figs.1-7), Borsuk, U.S.P. 4,743,283(Figs.1-3), Cozier et. al.,  
U.S.P. No.6,441,359(Figs.1-15) and Ghislain et. al., U.S.P. No.5,939,709(Figs.1-7).

A copy of PTO-1449 will also be included in this office action.

Any questions regarding this office action should be directed to:

**Brian M. Healy**

**Primary Examiner**

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**Phone: (703)308-2693**